

CHAPTER 7

POST OPERATIONAL PROCEDURES

LESSON PLAN 7

METHOD:

Conference, demonstration, and practical exercise

TIME ALLOTTED:

1.0 hour

COURSE PRESENTED TO:

- a. LAV-25 crews
- b. Instructors
- c. TAVSC personnel

TOOLS, EQUIPMENT, AND MATERIALS:

See Appendix A

PERSONNEL:

- a. Primary instructor
- b. Assistant instructor

INSTRUCTIONAL AIDS:

- a. Overhead projector
- b. Viewgraphs (Appendix C)

REFERENCES:

- a. TM 08594A-12&P, Chapters 2 and 3
- b. TM 08594A-10/1A
- c. TM 4700-15/1

APPENDICES:

- Appendix A. Tools, Equipment, and Materials
- Appendix B. Safety
- Appendix C. Viewgraphs

7-1. INTRODUCTION.

(5 minutes)

Note. Show Slide 1.

- a. **Reason.** After the completion of PGS training, crews must ensure that PGS equipment is operational, clean, and properly packed before turn-in. They must also return the LAV-25 and its turret weapons to normal mode of operation.

Note. Show Slide 2.

- b. **Training Objective.** Given an LAV-25 with SL3 and PGS installed, you will demonstrate post operational tasks and after operation PMCS on PGS IAW TM 08594A-12&P, Chapters 2 and 3. You will also return the vehicle and its weapons to normal, full-up mode IAW TM 08594A-10/1A.
- c. **Procedure.** During this block of instruction, we will cover the post operational tasks and after operation PMCS associated with PGS, the vehicle, and its turret weapons. An assistant instructor will be assigned for the practical exercise portion of the class. You will use the appropriate TMs to conduct these tasks.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE. (40 minutes)

Notes.

1. The primary instructor now releases the student crews to their assigned assistant instructors for the practical exercise portion of this lesson.
2. Each assistant instructor is to conduct a safety briefing for his small group IAW Appendix B.
3. Whenever possible, have the students serve as demonstrators during small group instruction. Have one student read the procedures while another student performs the task. To ensure all students get equal hands-on time, rotate the reading and performance responsibilities.

- a. **Post Operational Tasks.** Working as a crew, perform the following post operational tasks after completion of PGS training, using TM 08594A-12&P:

- (1) Conduct BIT.
- (2) Remove PGS components.
- (3) Clean and inspect PGS components IAW after operation PMCS.
- (4) Return LAV-25 and its turret weapon systems to normal mode of operation.
- (5) Turn in PGS set.

- b. **Conduct BIT.** Upon completion of training and prior to removal of the equipment, the crew conducts BIT to ensure the system is functional. Faulty components are identified for repair.

- (1) Turn on vehicle MASTER SWITCH.
- (2) Turn on turret power.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

- (3) Perform BIT IAW TM 08594A-12&P, Chapter 2.
- (4) If BIT passes, continue with removal.
- (5) If BIT fails, troubleshoot IAW TM 08594A-12&P, Chapters 3 and 4.

c. Removal of PGS.

Warning. Ensure TURRET DRIVE LOCK is set to LOCKED before removing PGS.

Warning. Ensure vehicle MASTER SWITCH is set OFF and all turret power is off before removing PGS.

Caution. Do not clean LAV-25 with high pressure water with PGS installed. Damage to PGS components can occur.

Note. Explain to the students that as PGS components are removed, they are placed in the storage cases for later cleaning and inspection. If units are extremely dirty, they must be cleaned prior to removal so they can be placed in cases.

- (1) Set vehicle MASTER SWITCH to OFF and ensure all turret power is off.
- (2) Set TURRET DRIVE LOCK to LOCKED.
- (3) Remove exterior cables.

(a) W1 cable (transceiver unit cable).

1. Disconnect W1 cable connector J1 from TBOS video mixer connector J1.
2. Carefully remove W1 cable from HE ammo box and guide cable through HE ammunition port from turret exterior.
3. Release all velcro straps.
4. Disconnect W1 cable connector J2 from transceiver unit connector J2.
5. Remove W1 cable.

(b) W7 cable (front target system cable).

1. Disconnect W7 cable connector J3 from target computer unit connector J3.
2. Carefully remove W7 from HE ammo box and guide cable through HE ammunition port from turret exterior.
3. Release all velcro straps.
4. Disconnect W7 cable connectors from the L/F and R/F RDUs.
5. Remove W7 cable.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(c) W8 cable (rear target system cable).

1. Disconnect W8 cable connector J4 from target computer unit connector J4.
2. Carefully remove W8 cable from HE ammo box and guide cable through HE ammunition port from turret exterior.
3. Release all velcro straps.
4. Disconnect W8 cable connectors from L/R and R/R RDUs.
5. Remove W8 cable.

(d) RSI antenna cable.

1. Disconnect the RSI antenna cable connector J3 from RSI unit connector.
2. Carefully remove RSI antenna cable from HE ammo box and guide cable through HE ammunition port from turret exterior.

(4) Remove interior cables.

- Notes.
1. W2, W3, W4, W5, W6, W9, W10, and W13 cables are factory installed in the vehicle interface assembly bracket and are not to be disconnected except for maintenance purposes.
 2. Vehicle electrical cables will be connected and disconnected by qualified personnel only.

(a) W11 cable (TBOS video mixer unit).

1. Disconnect W11 cable connector J3 from video mixer unit connector J3.
2. Carefully remove W11 cable from HE ammo box through ammo feed chute port.
3. Disconnect connector from the DIM36TH thermal sight assembly.
4. Disconnect vehicle cable W106 from W11 cable.
5. Connect vehicle connector W106 to J1 of right side of gunner's DIM36TH thermal sight assembly.
6. Remove W11 cable.

(b) W10 cable (TBOS eyepiece unit, commander).

1. Disconnect W10 cable connector J1 from TBOS commander's eyepiece unit connector J1.
2. Carefully remove W10 cable from HE ammo box through ammo feed chute port.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(c) W9 cable (TBOS eyepiece unit, gunner).

1. Disconnect W9 cable connector J1 from TBOS gunner's eyepiece unit connector J1.
2. Carefully remove W9 cable from HE ammo box through ammo feed chute port.

(d) W12 cable (power cable).

1. Disconnect W12 cable connector PDA J3 from the PDA connector J3.
2. Disconnect W12 connector W106P1 from the original vehicle cable W106P1.
3. Connect vehicle cable W106P1 to PDA.
4. Disconnect W12 cable connector J3 from vehicle interface unit connector J3.
5. Carefully remove W12 cable from HE ammo box through ammo feed chute port.
6. Remove W12 cable.

(e) Control panel and TDRS memory card.

1. Remove control panel bracket with control panel from HE ammo box lid.
2. Disconnect control panel cable connector J1 from vehicle interface unit connector J1.
3. Carefully remove control panel cable from HE ammo box through ammo feed chute port.
4. Remove TDRS memory card and stow in protective pouch.
5. Remove control panel from control panel bracket.

(f) W14 cable (interface cable).

1. Disconnect W14 cable connector J2 from expansion unit connector J2.
2. Carefully remove W14 cable from HE ammo box through ammo feed chute port.
3. Disconnect W14 cable connector J2 from the CDA connector J2.
4. Disconnect W14 cable connector J1 from the CDA connector J1.
5. Disconnect original vehicle cable W105P5 from W14 cable.
6. Disconnect original vehicle cable W105P4 from W14 cable.
7. Connect original vehicle cable W105P5 to CDA connector J2.
8. Connect original vehicle cable W105P4 to CDA connector J1.
9. Remove W14 cable.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(g) W13 cable (intercom cable).

1. Loosen nut securing W13 cable ground lug.
2. Remove W13 cable ground lug and retighten nut.
3. Disconnect two W13 cable leads marked INTERCOM from AM-7162 intercom amplifier box.
4. Carefully remove W13 cable from HE ammo box through ammo feed chute port.

(5) Remove interior components.

(a) Vehicle interface assembly.

1. Lift vehicle interface assembly from HE ammo box.
2. Install HE ammo box lid and HE ammunition feed chutes.

(b) Shorting plug.

1. Unzip weapons enclosure bag.
2. Press feeder handle latch and pull feeder handle to up and locked position.
3. Disconnect shorting plug from 25 mm power cable connector.
4. Connect 25 mm power cable connector to 25 mm gun power connector.
5. Push feeder handle to down and locked position.
6. Zip weapons enclosure bag.

(c) TBOS eyepiece unit, commander.

1. Lift locking lever and remove TBOS eyepiece unit from commander's daysight.
2. Loosen two setscrews that secure mounting screws of the commander's headrest using tool assembly provided.
3. Remove two mounting screws using tool assembly provided and remove replacement browpad.
4. Install commander's daysight browpad with two mounting screws using tool assembly provided.
5. Tighten setscrews.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(d) TBOS eyepiece unit, gunner.

1. Lift locking lever and remove TBOS eyepiece unit from gunner's daysight.

(6) Remove exterior components.

(a) Rear retro detector unit/hull defilade detector unit assembly.

Pull locking handle up and remove rear retro detector unit/hull defilade detector assembly from bustle rack.

(b) Front retro detector unit/hull defilade detector assemblies.

Lift locking handle and remove retro detector unit/hull defilade detector assemblies from turret lifting eyes.

(c) Transceiver assembly.

Release strap, unlock locking lever, and remove transceiver assembly from top of rotor extension and 25 mm gun barrel.

d. Clean and Inspect PGS Components.

(1) **General PMCS procedures.** If any deficiencies are discovered during visual inspection, ensure you:

- (a) Consult TM 08594A-12&P, Chapter 3 to determine if component is considered Not Mission Capable (NMC).
- (b) Tag the component with the problem discovered in accordance with instructions in TM 4700-15/1.
- (c) Report failure in accordance with instructions in TM 4700-15/1.
- (d) Return the component to training audio visual support center (TAVSC).

Caution. When cleaning components, ensure only authorized cleaning materials are used. Failure to use the correct cleaning materials can lead to premature failure of components.

Caution. Do not use high pressure water to clean the equipment due to risk of equipment damage.

(2) **General cleaning and inspection checks.** Perform the following general cleaning and inspection checks for all exterior and interior components:

- (a) Wipe component with a soft rag. Moisten rag with water if required.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

- (b) Visually inspect components for damaged or missing parts.
- (c) Inspect connectors for damage, foreign objects, and bent or damaged pins.
- (d) Verify all decals and markings are present and legible.
- (e) Lubricate all moving parts of mounting brackets with CLP (see Appendix A).
- (f) Replace all dust caps before packing assemblies in storage cases.

(3) Cleaning and inspection of exterior components.

- (a) Transceiver unit.

Caution. Always ensure that transceiver unit locking handle is locked to mounting bracket. Failure to follow this caution may result in transceiver unit falling out of mounting bracket and becoming damaged.

- 1. Check lens for damage or cracks.
- 2. Clean lens with lens paper moistened with lens cleaning compound.
- 3. Inspect locking handle for damage.
- 4. Inspect expansion rings for damage.
- 5. Check that moisture indicator is blue or light blue. Red or pink indicates moisture.

Note. Transceiver unit will rattle (if gently shaken) if shock sensor is tripped.

- 6. Check if shock sensor has been tripped.
- 7. Check mounting bracket for damage to locking handle and strap.
- 8. Inspect rubber pads of mounting bracket for damage.

- (b) Rear retro detector/hull defilade detector unit assembly.

- 1. Clean lenses with rag moistened with water.
- 2. Check reflectors and detectors for damage or cracks.
- 3. Check strobe light for damage.
- 4. Inspect rubber pads of mounting bracket for damage.

- (c) Front retro detector unit/hull defilade detector unit assemblies.

- 1. Clean lenses with a rag moistened with water.
- 2. Check reflectors and detectors for damage or cracks.
- 3. Check strobe light for damage.
- 4. Check rubber pads of mounting bracket for damage.
- 5. Inspect GPS antenna, cable, and cable connector for damage.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(4) Cleaning and inspection of interior components.

(a) TBOS eyepiece units (gunner's and commander's).

1. Check lens for damage or cracks. If lens is dirty, wipe with lens paper moistened with lens cleaning compound.
2. Inspect connector for damaged or missing dust cap.

Warning. Damaged browpad can cause injury or blindness to soldiers during training.

(b) Commander's browpad. Inspect browpad for damaged foam.

(c) Vehicle interface assembly.

Note. Vehicle interface assembly consists of vehicle interface unit; expansion unit; TBOS driver unit; RSI unit; target computer unit; video mixer unit; and W2, W3, W4, W5, W6, W9, W10, and W13 cables. Cables are not to be removed except for maintenance purposes only.

1. Check that moisture indicators color are blue or light blue. Red or pink indicates moisture.
2. Check that each unit is securely attached to bracket.
3. Inspect all cables for damage.
4. Inspect connectors on units and both ends of cables for damage, foreign objects, and bent or damaged pins.
5. Inspect cables for damaged or missing dust caps.
6. Inspect cables for damaged or missing velcro straps.

(d) Control panel.

Note. Moisture indicator is located in upper right corner of control panel display screen.

1. Check that moisture indicator color is blue or light blue. Red or pink indicates moisture.
2. Check pushbuttons for damage.
3. Inspect cable for damage.
4. Inspect cable for damaged or missing dust cap.
5. Check that eject button moves freely.
6. Check TDRS memory card dust cover for damage.

(e) Shorting plug. Clean and inspect IAW general cleaning and inspection instructions.

7-2. CONFERENCE/DEMONSTRATION/PRACTICAL EXERCISE (Con't).

(5) Cleaning and inspection of cables.

General cleaning and inspection checks. Perform the following general cleaning and inspection checks for all cables:

1. Wipe cables with a soft rag moistened with water.
2. Inspect cable material for damage.
3. Inspect cables for damaged and missing dust caps.
4. Inspect connectors for damage, foreign objects, and bent or damaged pins.
5. Verify all decals and markings are present and legible.
6. Install all connector dust caps before packing cables in storage case.
7. Inspect for missing or damaged magnets.

(6) Cleaning and inspection of storage cases.

Caution. Ensure insides of storage cases are dry prior to storage. Moisture inside storage cases could damage components.

- (a) Wipe cases with a soft rag.
- (b) Inspect latches for damage and missing parts.
- (c) Inspect hinges for damaged and broken parts.
- (d) Inspect handles for damage and missing parts.
- (e) Verify decals and markings are present and legible.

e. Return Vehicle and Turret Weapons to Normal Operation.

- (1) Perform after operation PMCS on LAV-25 turret.
- (2) Install HE feed chute.
- (3) Install vehicle browpad.
- (4) Remove mounting bolts for binocular storage box. Install box using mounting bolts.

f. Turn in PGS Set.

- (1) Clean and inspect all PGS equipment.
- (2) Dry all equipment prior to storage.
- (3) Store all components properly in storage cases.
- (4) Tag and turn in unserviceable or damaged components.

Note. Only TAVSC personnel are authorized to repair or replace faulty components IAW Maintenance Allocation Chart (MAC) in TM 08594A-12&P, Appendix B.

7-3. FINAL REVIEW.

(5 minutes)

a. **Student Questions.**

Note. Show Slide 3.

b. **Summary of Main Teaching Points.**

- (1) BIT
- (2) Removal of PGS
- (3) After operation PMCS
- (4) Vehicle returned to normal mode of operation
- (5) Turn in of PGS set

Note. Show Slide 4.

- c. **Closing Statement.** This block of instruction has prepared you to remove, clean, inspect, and turn in PGS components, as well as return the LAV-25 to its normal, full-up mode of operation.

APPENDIX A TO LESSON PLAN 7

POST OPERATIONAL PROCEDURES

TOOLS, EQUIPMENT, AND MATERIALS

Listed equipment is one per vehicle crew.

1. LAV-25 with SL3 with PGS installed
2. TM 08594A-12&P
3. TM 08594A-10/1A
4. Expendable/durable items (see Appendix D, TM 08594A-12&P)
5. TM 4700-15/1

APPENDIX B TO LESSON PLAN 7

POST OPERATIONAL PROCEDURES

SAFETY

The general safety regulations below must be followed during the performance of this lesson. All safety regulations outlined in TM 08594A-10/1A must be strictly followed.

1. Mount and dismount vehicle over left front or through back hatch.
2. Maintain three (3) points of contact while on top of vehicle.
3. Follow unit SOP on smoking near vehicle.
4. Do not go over or under gun barrel.
5. Ensure that TURRET DRIVE LOCK is set to LOCKED.
6. Set vehicle MASTER SWITCH OFF.
7. Turn turret power to OFF IAW TM 08594A-10/1A, paragraph 2-56.
8. Ensure that AP and HE feed shaft knobs (located on left side of main gun feeder) are pushed IN before training. When knobs are out, electrical cables may be snagged causing damage to the vehicle fire control system.
9. No cables should be connected or disconnected by untrained personnel.

**APPENDIX C
TO LESSON PLAN 7**

POST OPERATIONAL PROCEDURES

VIEWGRAPHS
